

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1. (currently amended) A method of routing traffic from each of a plurality of incoming line cards to one of a plurality of outgoing line cards to which outgoing transmission lines are connected, comprising:

monitoring said outgoing transmission lines exclusively;

communicating a fault indication to all of said incoming line cards if a fault condition is detected in at least one of said outgoing transmission lines; and

updating a routing table at each of said incoming line cards according to the fault indication so that packets from said incoming line cards are routed to normally operating outgoing transmission lines.

2. (currently amended) The method of claim 1, further comprising:

monitoring said outgoing line cards exclusively;

communicating a fault indication to all of said incoming line cards if a fault condition is detected in at least one of said outgoing line cards; and

updating a routing table at each of said incoming line

cards according to the fault indication so that packets from said incoming line cards are routed to normally operating outgoing line cards.

3. (currently amended) A method of routing traffic from each of a plurality of incoming line cards to one of a plurality of outgoing line cards to which outgoing transmission lines are connected, comprising:

receiving, at each of said incoming line cards, a packet from one of said incoming transmission lines;

determining an output port of a self-routing switch based on an address contained in the packet by using routing information stored in a routing table;

converting the packet into at least one intra-node cell of fixed data length and forwarding the cell to the switch so that the cell is routed to said output port;

receiving intra-node cells from the self-routing switch, converting the cells into a packet;

forwarding the packet to an outgoing transmission line;

monitoring the outgoing transmission lines exclusively;

communicating a fault indication to the incoming line cards if a fault condition is detected in at least one of said outgoing transmission lines; and

updating said routing table at each of said incoming line cards according to said fault indication so that traffic from the incoming line cards is routed to a normally operating outgoing transmission line.

4. (original) The method of claim 3, wherein the communicating step comprises communicating said fault indication via said self-routing switch.

5. (currently amended) The method of claim 3, further comprising:

monitoring said outgoing line cards exclusively;

communicating a fault indication to all of said incoming line cards if a fault condition is detected in at least one of said outgoing line cards; and

updating said routing table at each of said incoming line cards according to the fault indication so that packets from said incoming line cards are routed to normally operating outgoing line cards.

6. (original) The method of claim 5, wherein the communicating step comprises communicating said fault indication via said self-routing switch.

7. (original) A packet routing system comprising:

a self-routing switch;

a plurality of incoming line cards, connected to respective input ports of the self-routing switch, each incoming line card receiving an incoming packet, determining an output

port of the self-routing switch based on an address contained in the packet by using routing information stored in a routing table, converting the packet into at least one intra-node cell of fixed data length and forwarding the cell to the switch so that the cell is routed to said output port; and

a plurality of outgoing line cards, connected to respective output ports of the self-routing switch, each outgoing line card receiving intra-node cells from the self-routing switch, converting the cells into a packet, forwarding the packet to an outgoing transmission line, monitoring the outgoing transmission line, and transmitting a fault indication to the incoming line cards if a fault condition is detected in said outgoing transmission line,

each of said incoming line cards being responsive to the fault indication for updating said routing table so that traffic from the incoming line cards is routed to a normally operating outgoing transmission line.

8. (original) The packet routing system of claim 7, wherein each of said outgoing line cards is configured to monitor operating status of the outgoing line card and transmitting a fault indication to the incoming line cards if a fault condition is detected in said outgoing line card, each of said incoming line cards being responsive to the fault indication for updating said routing table so that traffic from the incoming line cards is routed to a normally operating

outgoing line card.

9. (original) The packet routing system of claim 7, wherein each of said outgoing line cards is configured to transmit said fault indication of the outgoing transmission line to the incoming line cards via said self-routing switch.

10. (original) The packet routing system of claim 8, wherein each of said outgoing line cards is configured to transmit said fault indication of the outgoing line card to the incoming line cards via said self-routing switch.

11. (original) A packet routing system comprising:

a self-routing switch;

a plurality of incoming line cards, connected to respective input ports of the self-routing switch, each incoming line card receiving an incoming packet, determining an output port of the self-routing switch based on an address contained in the packet by using routing information stored in a routing table, converting the packet into at least one intra-node cell of fixed data length and forwarding the cell to the switch so that the cell is routed to said output port; and

a plurality of outgoing line cards, connected to output ports of the self-routing switch, for receiving intra-node cells from the self-routing, each of the outgoing line cards including:

an interface having an input terminal connected to a corresponding one of said output ports of the switch and a

plurality of output terminals for distributing the received intra-node cells to one of the output terminals; and

a plurality of packet assemblers respectively connected to said output terminals of the interface, each packet assembler receiving the cells from the corresponding output terminal, converting the cells into a packet, and forwarding the packet to an outgoing transmission line,

a monitoring circuit for monitoring the outgoing transmission line, and transmitting a fault indication to the incoming line cards if a fault condition is detected in said outgoing transmission line,

each of said incoming line cards being responsive to the fault indication for updating said routing table so that traffic from the incoming line cards is routed to a normally operating outgoing transmission line.

12. (original) The packet routing system of claim 11, wherein each of said outgoing line cards is configured to monitor operating status of the outgoing line card and transmitting a fault indication to the incoming line cards if a fault condition is detected in said outgoing line card, each of said incoming line cards being responsive to the fault indication for updating said routing table so that traffic from the incoming line cards is routed to a normally operating outgoing line card.

13. (original) The packet routing system of claim 11, wherein each of said outgoing line cards is configured to transmit

said fault indication of the outgoing transmission line to the incoming line cards via said self-routing switch.

14. (currently amended) The packet routing system of claim [[11]] 12, wherein each of said outgoing line cards is configured to transmit said fault indication of the outgoing line card to the incoming line cards via said self-routing switch.